

TS-1000 & 2000

Automatic Tank Gauging & Electronic Line Leak Detection System

INCON

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Evaluator: Ken Wilcox Associates - 08/05/92

System Description: The *TS-1000/2000* is a monitoring system that can test and gauge 2 or 4 tank systems. In addition, the *TS-1000/2000* can be *optionally* equipped with up to 8 leak detection sensors to support interstitial, sump, vapor and groundwater monitoring. Alarms can be setup to sound audibly or control relay contacts for high product levels, high water levels and tank leaks. An *optional* relay output *BriteBox* accessory unit may be configured to shut-off product dispenser pumps or to turn on/off other devices. The system can also be equipped with *optional TS-LLD* line leak detection software.

Certification: **TANK GAUGING**

0.2 gph with PD = 99.9% and PFA = 0.1%

LINE TEST

3, 0.2 & 0.1 gph with PD = 100% and PFA = 0%

Tank Capacity: Max. 15,000 gal

Test Period: Min. 5 hrs with tank 50 - 95% full (*TS-1000*)

Min. 3 hrs with tank 50 - 95% full (*TS-2000*)

Limitations:

- No dispensing or delivery during test
- Not evaluated using manifolded tanks

Revised 12/17/98

SAMPLE REPORTS

TS-1000

A N GROSS 7	B O NET 8	C P LEVEL 9	← ← CANCEL CANCEL
D Q ULLGE 4	E R WATER 5	F S TEMP 6	G T UP +/-
H U CLOCK 1	I V ALARM 2	J W REPORT 3	K X DOWN SPACE
ACK SHIFT	L Y TEST 0	M Z SETUP .	ENTER

Reports Available

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Inventory 3. Delivery 5. Leak Test 7. Alarm 9. Line Test | <ol style="list-style-type: none"> 2. Reconciliation 4. Delivery History 6. Leak Time Estimate 8. Alarm History 10. Line Test History |
|---|--|
11. Alarm Status and Configuration
 12. System Configuration
 13. Tank Configuration

Console Keypad

1. To Print Desired Report

- a. Press **REPORT** key
- b. Press **UP** or **DOWN** until desired report
- c. Press **ENTER**
- d. If prompted, enter tank number or **0** for all tanks
- e. Press **ENTER** to print report

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/25/1990 02:09 PM
INVENTORY REPORT

TANK NO. 1 8000 GAL
UNLEADED REG

GROSS	5051.7 GAL
NET	5024.7 GAL
PROD LEVEL	57.918 IN
ULLAGE	2963.4 GAL
TEMPERATURE	67.606 F
WATER LEVEL	0.584 IN
WATER VOL	6.4 GAL

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/25/1990 02:11 PM
LEAK TEST REPORT

TANK NO. 1 8000 GAL
UNLEADED REG

THRESHOLD	0.20 GAL/HR
CONFIDENCE LEVEL	95.0%
TEST STARTED	12:00 AM
TEST STARTED	07/25/1990
LAST DELIVERY	6:13 AM
LAST DELIVERY	07/24/1990
% GROSS CAPACITY	73.60
BEGIN GROSS	5983.8 GAL
BEGIN NET	5869.2 GAL
BEGIN LEVEL	66.311 IN
BEGIN TEMP	68.334 F
BEGIN WATER	6.5 GAL
BEGIN WATER	0.584 IN
END TIME	1:59 AM
END DATE	07/25/1990
END GROSS	5983.4 GAL
END NET	5869.3 GAL
END LEVEL	66.307 IN
END TEMP	68.219 F
END WATER	6.5 GAL
END WATER	0.584 IN

HOURLY DATA

TIME	DEG F	GAL
1:00 AM	68.276	5875.68
1:59 AM	68.219	5875.72

SLOPE	0.04 GAL/HR
SLOPE LOW	0.04 GAL/HR
SLOPE HIGH	0.04 GAL/HR
TEST RESULTS	PASSED

SAMPLE REPORTS

TS-1000

(cont)

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/24/1990 04:39 AM
ALARM REPORT

7/24/1990 04:38 AM
THEFT
TANK NO. 1

Report

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/25/1990 02:12 PM
ALARM HISTORY REPORT

7/11/1990 05:40 PM
POWER UP

7/11/1990 05:40 PM
OVERFILL
TANK NO. 1

7/23/1990 03:30 PM
POWER UP

7/23/1990 06:17 PM
LOW LIMIT
TANK NO. 1

7/25/1990 05:51 AM
THEFT
TANK NO. 1

Alarm History Report

Alarm

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/25/1990 02:10 PM
DELIVERY REPORT

TANK NO. 1 0000 GAL
UNLEADED REG

BEGIN TIME	6:15 AM
BEGIN DATE	07/24/1990
BEGIN GROSS	799.3 GAL
BEGIN NET	796.7 GAL
BEGIN LEVEL	15.065 IN
BEGIN WATER	0.571 IN
BEGIN WATER	6.2 GAL
BEGIN TEMP	64.601 F
END TIME	6:37 AM
END DATE	07/24/1990
END GROSS	6722.0 GAL
END NET	6676.5 GAL
END LEVEL	75.066 IN
END WATER	0.581 IN
END WATER	6.4 GAL
END TEMP	69.788 F
GROSS DEL	5923.5 GAL
NET DEL	5879.8 GAL

Delivery Report

JOHNS GAS STOP
111 OAK ST.
BIDDEFORD, ME 04005
SITE # 001

7/25/1990 02:14 PM
DELIVERY HISTORY REPORT

TANK NO. 1 0000 GAL
UNLEADED REG

BEGIN TIME	6:15 AM
BEGIN DATE	07/24/1990
BEGIN GROSS	799.3 GAL
BEGIN NET	796.7 GAL
BEGIN LEVEL	15.065 IN
BEGIN WATER	0.571 IN
BEGIN WATER	6.2 GAL
BEGIN TEMP	64.601 F
END TIME	6:37 AM
END DATE	07/24/1990
END GROSS	6722.0 GAL
END NET	6676.5 GAL
END LEVEL	75.066 IN
END WATER	0.581 IN
END WATER	6.4 GAL
END TEMP	69.788 F
GROSS DEL	5923.5 GAL
NET DEL	5879.8 GAL

Delivery History Report

BEGIN TIME	6:15 AM
BEGIN DATE	08/24/1990
BEGIN GROSS	1657.0 GAL
BEGIN NET	1650.0 GAL
BEGIN LEVEL	24.952 IN
BEGIN WATER	0.054 IN
BEGIN WATER	0.0 GAL
BEGIN TEMP	66.753 F
END TIME	6:21 AM
END DATE	08/24/1990
END GROSS	3190.3 GAL
END NET	3171.5 GAL
END LEVEL	40.026 IN
END WATER	0.058 IN
END WATER	0.0 GAL
END TEMP	68.417 F
GROSS DEL	1532.4 GAL
NET DEL	1521.5 GAL